

## REMARKS

In the Office Action mailed July 19, 2005, the Examiner objected to claim 31 and rejected claims 1-49 under 35 U.S.C. § 102(e) as being anticipated by *Bradbury et al.* (U.S. Patent Publication No. 2002/0007294).

By this amendment, Applicant amends claims 31, 43, 44, 46, and 48 and adds new claims 50 and 51. Based on these amendments and the following arguments, Applicant respectfully traverses the Examiner's objection to claim 31 and the rejection of claims 1-49 under 35 U.S.C. § 102(e).

### I. The Objection to Claim 31

The Examiner objects to claim 31 "as being of improper independent form." Accordingly, Applicant changes the dependency of claim 31 from independent claim 24 to independent claim 27. Therefore, because amended claim 31 properly depends from claim 27, Applicant requests the objection to this claim be withdrawn.

### II. The Rejections Under 35 U.S.C. § 102(e)

In order to properly anticipate Applicant's claimed invention under 35 U.S.C. § 102(e), each and every element of the claim at issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Further, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131. Finally, "[t]he elements must be arranged as required by the claim." *Id.*

The Examiner asserts *Bradbury et al.* discloses each of the recitations of claim 1-49 (OA at 3.) Applicant disagrees with the Examiner's position for the following reasons.

*Bradbury et al.* discloses a system and method for customizing and manufacturing biomedical devices. The system creates patient data (e.g., MRU or CT scan data), converts the patient data to a digital format and generates a 3D electronic model of an object to be manufactured. *Bradbury et al.* at ¶¶ [20 and 21]. The model is used to create machine instructions that direct the manufacturing of the object. *Bradbury et al.* at Fig. 1 and ¶¶ [15]. During the model construction phase, the 3D model data of the object may be transmitted back to the doctor/patient for review for collaborative design of the object. *Bradbury et al.* at ¶¶ [35 and 36].

Contrary to the Examiner's assertions, however, *Bradbury et al.* does not disclose establishing an engineering model of a component, receiving selection data for configuring the component from a user, and a web-based model of the component based on the selection data and the engineering model, as recited in claim 1. Although *Bradbury et al.* creates a multi-dimensional electronic model of an object to be manufactured from transmitted patient data, no other model is created. Instead, either the model data is sent back to the doctor who sent the patient data for collaborative design, or is translated into machine instructions for manufacturing the object. *Bradbury et al.* at Fig. 1 and ¶¶ [15, 35, and 36]. *Bradbury et al.* does not teach establishing a web-based model of the component based on selection data and an engineering model.

Further, *Bradbury et al.* does not teach or suggest performing a simulation of the web-based model, as recited in claim 1. The Examiner asserts lines 7-9 of paragraph

14 discloses such a simulation process. Applicant disagrees. Transmitting converted patient data stored as a computer file to a remote site and converting the computer file into a multi-dimensional model and then into machine instructions is in no way performing a simulation of a web-based model. Indeed, *Bradbury et al.* is completely silent on any simulation processes. Instead, *Bradbury et al.* uses collaborative design techniques to manufacture an object for use with a patient. These techniques merely provide an environment from which remote entities may view the design data of an object to facilitate its manufacture. There is simply no simulation of any model of a component discussed in *Bradbury et al.*

Because *Bradbury et al.* does not teach each and every recitation of claim 1, the reference does not support the rejection of this claim under 35 U.S.C. § 102(e). As such, Applicant requests that the rejection of claim 1 be withdrawn and the claim allowed.

Claims 2-26 depend from claim 1. As explained, claim 1 is distinguishable from *Bradbury et al.* Accordingly, claims 2-26 are also distinguishable from the cited art for at least the same reasons set forth above in connection with claim 1. Therefore, Applicant requests that the rejection of claims 2-26 be withdrawn and the claims allowed. Further, contrary to the Examiner's assertions, *Bradbury et al.* does not teach the additional recitations of claims 2-26. For example, the Examiner is misplaced in asserting that *Bradbury et al.* discloses performing the simulation of the web-based model in a simulation environment. (OA at 3 and 4.) Indeed, paragraph [22] cited by the Examiner merely states, "the multi-dimensional model essentially becomes just another data set or mathematical object capable of being further processed or manipulated by typical

CAD software.” *Bradbury et al* at ¶ [22]. This portion, or any other portion, of *Bradbury et al.* does not disclose a simulation environment or performing a simulation of a web-based model. Instead, *Bradbury et al.* merely describes the ability for the multi-dimensional model data to be manipulated by CAD software, and not for simulation of a component model. Similarly, *Bradbury et al.* does not teach providing to a user feedback data reflecting characteristics of the web-based model during the simulation, as recited in claim 3. Indeed, there is no correlation between modifying the geometric configuration of a model (e.g., enlarging part of the modeled object) to the feedback data recited in claim 3. (See *Bradbury et al.* at ¶ [29], cited by the Examiner.) Nor does this portion of the specification show updating the web-based model of the component based on the detected change to the engineering model of the component, as recited in claim 7.

Additionally, the Examiner is incorrect in asserting *Bradbury et al.* discloses lightening the engineering model and establishing the web-based model based on the lightened engineering model, as recited in claim 8. (OA at 5.) Indeed, paragraph [26] (referenced by the Examiner) merely describes adding features to the multi-dimensional model. In fact, *Bradbury et al.* discloses adding or removing material, such as part of bones or body structures, to the model. These features do not teach or even suggest lightening an engineering model, much less establishing a web-based model based on the lightened engineering model, as recited in claim 8.

Also, the Examiner has incorrectly alleged that *Bradbury et al.* discloses a simulation environment, as recited in claim 11. Paragraph [27] merely suggests “[c]reating multi-dimensional model advantageously allows trying out different surgical

approaches, attachment points, final cosmetic fit and the like.” This is clearly not a simulation environment and clearly does not support the assertion that *Bradbury et al.* discloses, among other things, providing to the user one or more options reflecting various simulation environment that the web-based model may be simulated within, receiving a selection from the user, and perform a simulation of the web-based model in the selected simulation environment, as asserted by the Examiner. (OA at 6.)

Similarly, the Examiner is incorrect in asserting *Bradbury et al.* teaches a simulated environment reflecting any type of terrain, underwater, water surface, outer space, subterranean, and atmospheric work environment. (OA at 7.) Indeed, it is unclear how the Examiner concludes *Bradbury et al.* discloses such features when describing adding or removing material associated with parts of a patient’s body. *Bradbury et al.* at ¶ [26].

Further, *Bradbury et al.* does not teach simulating a manipulation of a simulated load by the web-based model, as asserted by the Examiner. (OA at 6.) Instead, *Bradbury et al.* merely describes the features of CAD design in assisting in the manufacture and assembly of an object. *Bradbury et al.* at ¶ [32]. Moreover, this paragraph does not show establishing a plurality of duplicate web-based models of the component, and simulating the work operation in the work environment using the duplicate web-based models, as asserted by the Examiner and recited in claim 20. Indeed, *Bradbury et al.* does not even mention establishing duplicate 3D models of its medical device objects, much less simulating their operations. Similarly, the Examiner is incorrect in alleging *Bradbury et al.* teaches allowing the user to adjust the number of duplicate web-based models, and performing a virtual repair of a web-based model, as

recited in claims 23 and 25. (OA at 9-10.) Also, contrary to the Examiner's assertions, *Bradbury et al.* does not teach providing instructional information to the user while the user operates the web-based model in the virtual training environment. (OA at 10.) Instead, *Bradbury et al.* merely describes assembly information via CAD software for manufacturing the medical device object. *Bradbury et al.* at ¶ [32].

Accordingly, *Bradbury et al.* does not teach or even suggest the recitations of dependent claims 2-26, and thus Applicant requests the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn, and the claims allowed.

The Examiner also asserts *Bradbury et al.* teaches the recitations of claim 27. (OA at 10-11.) In particular, the Examiner alleges paragraphs [5] and [14] of *Bradbury et al.* disclose a process for establishing a web-based model of the component based on the configuration data and an engineering model of the component and a process for providing to the client system a simulation of the web-based model. Applicant disagrees. As explained above in connection with claim 1, *Bradbury et al.* fails to disclose an engineering model and a web-based model. Further, *Bradbury et al.* does not teach simulation processes of any kind, much less providing simulation of the web-based model to a client system. For instance, lines 3-5 and 7-8 of paragraph [5] (cited by the Examiner) merely describe material replacement techniques for surgery of a human body. Lines 3-5 and 7-9 of paragraph [14] (also cited by the Examiner) merely describe the manner by which the patient data is transmitted to a remote site for conversion to the multi-dimensional model. None of these portions of *Bradbury et al.* discloses establishing a web-based model and providing a simulation, as recited in claim 27.

Accordingly, *Bradbury et al.* does not support the Examiner's rejection of claim 27 under 35 U.S.C. § 102(e) and thus, Applicant requests the rejection be withdrawn and the claim allowed.

Claims 28-37 depend from claim 27. As explained, claim 27 is distinguishable from *Bradbury et al.* Accordingly, claims 28-37 are also distinguishable from the cited art for at least the same reasons set forth above in connection with claim 27. Further, contrary to the Examiner's assertions, *Bradbury et al.* does not teach the additional recitations of dependent claims 28-37. As explained above in connection with dependent claims 2-26, *Bradbury et al.* does not disclose providing to a user feedback data reflecting characteristics of the web-based model during the simulation, as recited in claim 28. Nor does the reference show updating the web-based model of the component based on the detected change to the engineering model of the component, as recited in claim 29. Additionally, *Bradbury et al.* fails to teach processes for lightening the engineering model and establishing the web-based model based on the lightened engineering model, as recited in claim 30. Also, *Bradbury et al.* fails to teach simulation environments, much less one or more options reflecting various environments that the web-based model may be simulated within, as recited in claim 31. Moreover, the Examiner is misplaced in asserting *Bradbury et al.* teaches a process for manipulating the web-based model in a selected simulation environment based on input data. In fact, *Bradbury et al.* only describes the conversion of patient data to digital data in lines 3-5 of paragraph [15] (cited by the Examiner, OA at 12). As such, *Bradbury et al.* does not teach the recitations of claim 32. Similarly, *Bradbury et al.* does not disclose or even suggest a simulated environment reflecting any type of terrain,

underwater, water surface, outer space, subterranean, and atmospheric work environment. (OA at 12-13.) Also, as mentioned above in connection with claim 20, paragraphs 15 and 14 of *Bradbury et al.* do not show establishing a plurality of duplicate web-based models of the component, and simulating the work operation in the work environment using the duplicate web-based models, as recited in claim 35. Further, the description of CAD software and its use in checking part consistencies does not teach simulating a virtual repair of the web based model in a simulation environment. (OA at 14.) As such, claim 37 is also distinguishable from *Bradbury et al.*

Accordingly, *Bradbury et al.* does not teach or even suggest the recitations of dependent claims 28-37, and thus Applicant requests the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn, and the claims allowed.

The Examiner rejects claims 38-49 for the same reasons set forth for claims 1-3, 7, 8, 13, 14, 15, 16, 20,21, and 25 (OA at 14-18.) Accordingly, claims 38-49 are distinguishable from *Bradbury et al.* for at least the same reasons set forth above in connection with claims 1-26. Therefore, *Bradbury et al.* does not support the rejection of claims 38-49 under 35 U.S.C. § 102(e) and Applicant requests that the rejection of these claims be withdrawn and the claims allowed.

### III. New claims 50 and 51

The cited art also does not teach the recitations of claims 50 and 51, which similar to claims 1 and 27, respectively, and each includes a component of a work machine. As explained, *Bradbury et al.* is directed toward a method and system for designing and manufacturing medical devices via remotely. The reference does not teach or suggest a method or system for simulating one or more components of a work



machine, as recited in claims 50 and 51. Therefore, for at least the same reasons set forth above for claims 1 and 27, Applicant requests the timely allowance of claims 50 and 51.

IV. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of claims 1-51.

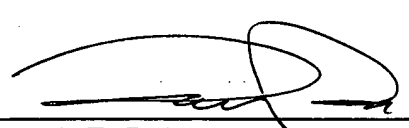
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

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By: \_\_\_\_\_

  
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